- # THEME: Healthcare Technology

## PROBLEM STATEMENT

Elderly people often face loneliness, missed medications, difficulty scheduling doctor visits, and trouble communicating their needs, especially when they live alone or far from family. Existing apps designed to address these issues are often too complex, not senior-friendly, or focus on only one aspect of eldercare (e.g., just medication reminders or emergency calls).

Caregivers, meanwhile, lack a unified dashboard to monitor their elders' daily health, activities, and receive timely alerts, making it harder to provide proactive, responsive care.

There is a need for an all-in-one, easy-to-use eldercare website that empowers elders with voice assistance, health & emotional wellbeing tools, medication tracking, and provides caregivers with a dedicated dashboard to monitor, communicate, and ensure elders' safety and wellbeing — all in a single accessible platform.

# PROPOSED SOLUTION

We propose ElderCare, an all-in-one, user-friendly web platform that empowers elders and their caregivers.
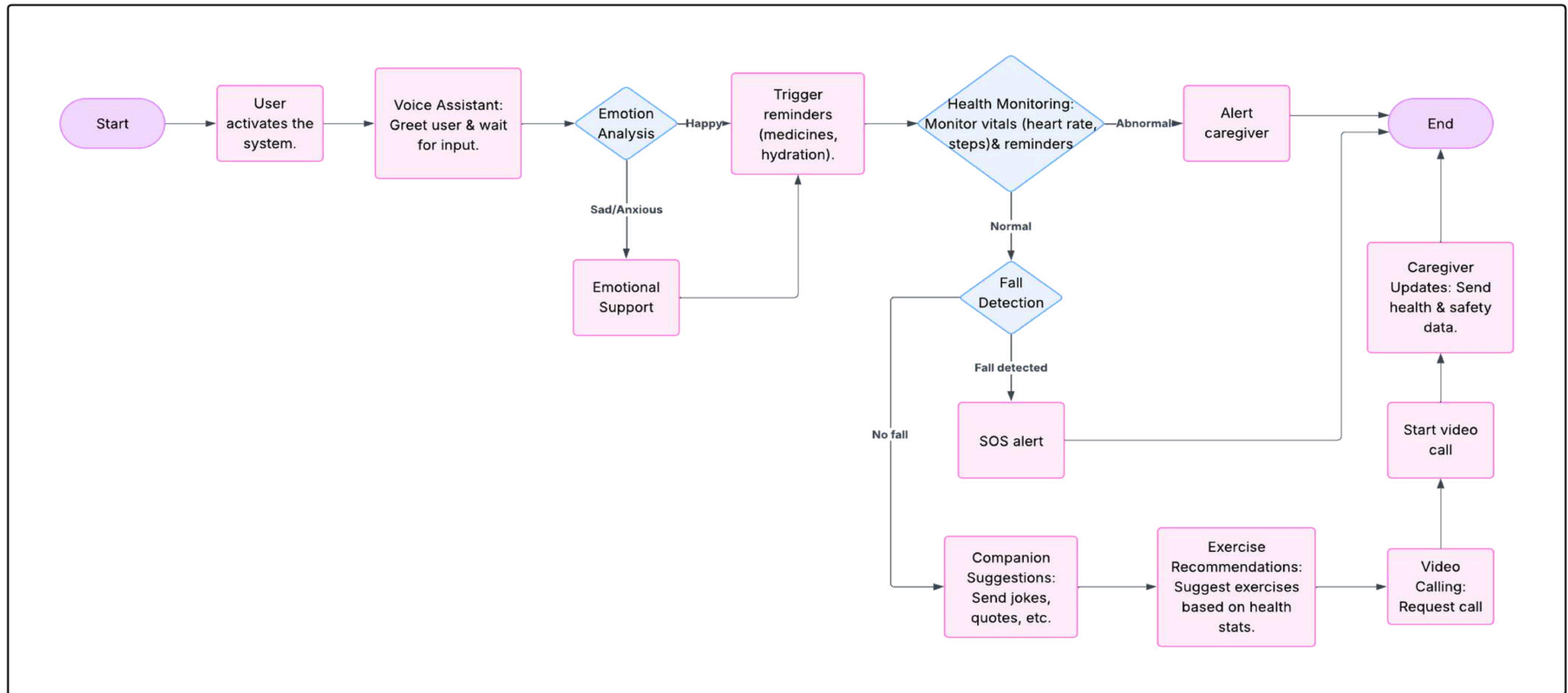
## For Elders:

- Voice-based assistant for easy interaction without complicated menus.
- Personalized diet plan tailored to their health conditions and dietary needs.
- Medication tracker with reminders and confirmations to avoid missed doses.
- Health & wellbeing modules providing daily health summaries.
- Emotional wellbeing module offering relaxation exercises, mood check-ins, and resources to support mental health.
- Journal feature where elders can share or record their day, thoughts, or memories, fostering reflection and a sense of connection.
- Mitra AI chat companion that engages elders in conversation and sets voice-activated reminders (e.g., "Mitra, remind me to take my medicine at 5 PM"), helping them manage forgetfulness.
- Emergency alert system to quickly call for help with a single click or voice command.

## For Caregivers:

- Caregiver Dashboard showing real-time updates on the elder's health metrics, daily activities, and medication adherence.
- Notifications & alerts for missed medications, unusual activity, or environmental concerns (e.g., room temperature too high).
- Secure communication tools to call or message the elder directly from the platform.
- Caregiver notes section to log observations and keep track of the elder's condition over time.

# FLOWCHART / DIAGRAM

# FLOWCHART / DIAGRAM EXPLANATION

The ElderCare system begins when the user activates the platform, which launches Mitra, the voice assistant. Mitra greets the elder and waits for their input. It then performs emotion analysis by listening to the user's voice; if the user sounds sad or anxious, Mitra provides emotional support through comforting words, jokes, or motivational quotes before proceeding. Otherwise, if the user seems happy, the system continues normally. Next, the system checks and issues reminders for important activities like taking medications and staying hydrated to ensure nothing is missed. Meanwhile, vital signs such as heart rate, activity level, and room temperature are continuously monitored. If the health readings are normal, the system offers companion suggestions like sharing jokes or quotes, along with exercise recommendations based on the elder's health stats. If abnormal readings are detected, the system immediately alerts the caregiver. The system also checks for falls; if a fall is detected, it sends an SOS alert to caregivers or emergency contacts. Elders can request a video call at any time, during which caregivers receive real-time updates on the elder's health and safety data. The session then either continues with ongoing monitoring and interaction or ends once all tasks are completed.

# FEATURES

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## NOVELTY

- All-in-one approach: Unlike existing solutions focusing only on one aspect (e.g., just meds or just alerts), ElderCare integrates health, diet, emotional wellbeing, and communication.
- Mitra AI companion uniquely combines conversation and smart reminders, tailored to elders' forgetfulness needs.
- Accessibility-first design with large fonts, simple navigation, and voice features specifically for elderly users.
- Dual-user focus: Addresses both elders' needs and caregivers' needs in a unified platform.

# DRAWBACK AND SHOWSTOPPERS

A major drawback of the ElderCare system is its dependence on a stable internet connection. Features like Mitra, the AI voice companion, rely heavily on real-time API requests to process voice commands, fetch reminders, and provide timely responses. In areas with poor or inconsistent connectivity, the voice assistant may fail to understand or respond, reminders might not trigger on time, and caregiver alerts could be delayed. This directly affects the core promise of safety and assistance for elders. As a result, unreliable or unavailable internet access is not just a limitation — it is a showstopper that can render the entire ElderCare platform ineffective, as critical functionalities would fail when connectivity is lost or unstable.

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# Thank you